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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/741,671	12/19/2003	Michael D. Hillman	4860.P2667X1	4171

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EXAMINER

EDWARDS, ANTHONY Q

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

Application No.

10741.671

<b>Applicant(s)</b>
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HILLMAN ET AL.

**Examiner**

**Anthony Q. Edwards**

### Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.  
4a) Of the above claim(s) 2-16 and 23-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/15/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 17, 18, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,366,452 to Wang et al. ("Wang" hereinafter) in view of U.S. Patent No. 4,848,179 to Ubhayakar. Referring to claim 1, Wang discloses a computer controlled display device (40), comprising a flat panel display (14) having an input (not shown, see col. 2, lines 42-45) for receiving display data, a moveable assembly (44) coupled with the display having a cross-sectional area which is substantially less than a cross-sectional area of a display structure (14) of said flat panel display (40). Wang does not disclose the moveable assembly being articulated to provide at least three degrees of freedom of movement for said flat panel display device relative to the base.

Ubhayakar teaches providing a flexi-digit robotic manipulator (see Fig. 2), wherein the manipulator is attached to a base (3) at one end and includes article retaining or holding means (1a) at another end.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the moveable assembly of Wang to include a flexi-digit manipulator, as taught by Ubhayakar, since the device of Ubhayakar would provide an

Art Unit: 2835

increased amount of flexibility for viewing the flat panel display of Wang, without increasing the amount of desktop space required.

Referring to claims 17 and 18, Wang in view of Ubhayakar disclose a computer controlled display device, wherein the moveable assembly (1) wherein comprises a proximal end (near 1a) and a distal end (near 3), at least one link (5k) disposed near a base (3), and a shape-memory metal shaft (see Fig. 6c of Ubhayakar) disposed within said at least one link, wherein said shape-memory metal shaft comprises nickel-titanium. See col. 7, lines 48-49 of Ubhayakar.

Referring to claim 19, Wang in view of Ubhayakar disclose a computer controlled display device, wherein said moveable assembly has one of a data cable and power cable (see col. 9, lines 18-24 of Ubhayakar), tension mechanism (Fig. 6c of Ubhayakar), and an anti-torsion mechanism (see col. 3, lines 27-32 of Ubhayakar).

Referring to claims 21 and 22, Wang in view of Ubhayakar disclose a computer controlled display device further comprising a ferrule (i.e., round end structures, not numbered, shown in Fig. 6c of Ubhayakar) near both the proximal end of the shaft and the distal end of the shaft to maintain tension force applied to the shape-memory metal shaft.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Ubhayakar, and further in view of U.S. Patent No. 5,684,448 to Jacobsen et al. Wang, as modified, discloses the device as substantially claimed, except for the shape-memory metal shaft being looped at least once from said proximal end to said distal

Art Unit: 2835

end. Jacobsen teaches provided a shape memory switch, utilizing shape "looped" shaped-memory wire(s). See Fig. 2 and col. 8, lines 15-18.

It would have been obvious to one having ordinary skill in the art at the time of the invention to further modify the moveable assembly of Wang to include a single, looped shape-memory wire or shaft, as taught by Jacobsen, since the single, looped shape-memory device of Jacobsen would reduce the number of shafts or wires in the assembly of Wang, thereby reducing the manufacturing and maintenance costs for the same.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Q. Edwards whose telephone number is 571-272-2042. The examiner can normally be reached on M-F (7:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2835

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 16, 2006  
aqe

  
LYNN FEILD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800